WE CLAIM:

1. A system for associating at least one assumed demographic data with a Consumer Identification ("CID") associated with a transaction history for a consumer, comprising:

a database;

a computer system having read and write access to said database; and

wherein said database stores a plurality of consumer records including a first consumer record for a first consumer;

wherein said first consumer record stores:

(1) CID data (consumer identification data) indicating a first consumer CID for said first consumer;

in association with said first consumer CID, at least the following:

(2) transaction data in a first transaction class field indicating items transacted by said first consumer in a first transaction class during a first prior time period; and

(3) a first assumed non-transaction demographic data field for storing assumed non-transaction demographic data.

2. The system of claim 1 wherein said computer system comprises means or code for assuming a value for said first assumed non-transaction demographic data field of said first consumer record based upon data in other fields of said first consumer record.

3. The system of claim 1 wherein said computer system comprises means or code for deriving a value for a derived data field of said first consumer record based upon data in other fields of said first consumer record.

4. The system of claim 2 wherein said value for said assumed non-transaction demographic data field is a probability or an expectation.

5. The system of claim 3 wherein said value for said derived data field is a probability or an expectation.

6. The system of claim 1 further comprising means or code for identifying, from a group of assumed non-transaction demographic data fields in said first consumer record, that non-transaction demographic data field which has the highest probability of being correct.

7. The system of claim 6 further comprising means or code for identifying, from a group including at least one assumed non-transaction demographic data field and one mixed derived demographic data field in said first consumer record, that non-transaction demographic data field which has the highest probability of being correct for the corresponding consumer.

8. The system of claim 1 further comprising means or code for ranking a group of assumed non-transaction demographic data in said first consumer record according to the probability of the assumed non-transaction demographic data being correct for a consumer corresponding to said first consumer CID.

9. The system of claim 8 further comprising means or code for identifying, from a group including at least one assumed non-transaction demographic data field and one mixed derived demographic data field in said first consumer record, that non-transaction or mixed derived demographic data field which has the highest probability of being correct for the corresponding consumer.

10. The system of claim 1 further comprising means or code for determining whether to offer to said first consumer an incentive based upon data stored in said first consumer record for at least one of an assumed non-transaction demographic, a dis-assumed non-transaction demographic, a mixed derived demographic, a most probable assumed non-transaction demographic, a most probable dis-assumed non-transaction demographic, a probability of assumed non-transaction demographic, a probability of dis-assumed non-transaction demographic, a ranking of assumed non-transaction demographic, and a ranking of dis-assumed non-transaction demographic associated with that consumer.

11. A system for defining or selecting terms of at least one purchase incentive offer to associate with a Consumer Identification ("CID") associated with a transaction history for a consumer, comprising:

a database;

a computer system having read and write access to said database; and

wherein said database stores a plurality of consumer records including a first consumer record for a first consumer;

wherein said first consumer record stores:

(1) CID data (consumer identification data) indicating a first consumer CID for said first consumer;

in association with said first consumer CID, at least the following:

(2) transaction data in a first transaction class field indicating items transacted by said first consumer in a first transaction class during a first prior time period;

(3) a first assumed non-transaction demographic data field for storing assumed non-transaction demographic data; and

means or code for defining or selecting terms of a purchase incentive offer to associate with said CID wherein said defining or selecting depends at least in part upon one of an assumed non-transaction demographic, dis-assumed non-transaction demographic, a most probable assumed non-transaction demographic, a most probable dis-assumed non-transaction demographic, a probability of an assumed non-transaction demographic, a probability of dis-assumed non-transaction demographic, a ranking of an assumed non-transaction demographic, and a ranking of dis-assumed non-transaction demographic associated with that consumer.

12. The system of claim 11 wherein said defining or selecting depends at least in part upon assumed non-transaction demographic data.

13. A system for defining a probability value that a demographic data value either is associated with a consumer or is not associated with the consumer, comprising:

a database;

a computer system having read and write access to said database; and

wherein said database stores a plurality of consumer records;

wherein each one of said plurality of consumer record stores:

(1) CID data (consumer identification data) indicating a CID, (2) transaction data in a first transaction class field indicating items transacted during a first prior time period, and (3) a first actual demographic data field for storing actual, non-assumed, demographic data for a first demographic data variable;

means or code for determining correlations between transaction data and data stored in said actual demographic data field from said plurality of consumer records and using at least one of said correlations to define a probability function, wherein

said probability function is a function at least of transaction data, and said probability function applied to a consumer record generates a probability value that the consumer associated with said consumer record has a specified value for said first demographic variable;

means or code for storing said probability value in a data field for said specified value for said first demographic value and said consumer record.

14. The system of claim 13 wherein said means or code for determining correlations uses data from at least two transaction data fields in said plurality of consumer records.

15. The system of claim 13 wherein said means or code for determining correlations uses data in at least three transaction data fields in said plurality of consumer records.

16. The system of claim 13 wherein said probability value is one or zero.

17. The system of claim 13 further comprising means or code for determining, by applying a function to demographics associated with said consumer and prior product incentive redemption history for that consumer, which of a set of incentive offers said consumer is most likely to redeem.

18. The system of claim 13 further comprising means or code for determining, from probability of each one of a set of assumed non-transaction demographics associated with said consumer, a set of incentive offers for purchase of specified products available to be offered to said consumer, and probability of said consumer redeeming each one of said set of incentive offers, which incentive offer, if actually offered to said consumer, is likely to result in the greatest profit.

19. A system for estimating a fraction of people having a specified demographic value that both shop in a specified retail store and live in a specified block region comprising:

a transaction data database;

a block data database;

a computer system having read and write access to said transaction data database and said block data database; and

wherein said transaction data database stores a plurality of consumer records

each including at least a CID data (consumer identification data) indicating a consumer CID and a first assumed non-transaction demographic data field for storing assumed non-transaction demographic data for customers of said retail store;

wherein said block data database stores at least one block data record for a geographic region near the location of the retail store, each block data record storing, for its corresponding geographic region, a number of people or consumers residing in that region, and a number of people or consumers having said specified demographic value; and

means or code for using data stored in said both said transaction data database and said block data database to estimate said fraction of people having said specified demographic value that both shop in said specified retail store and live in said specified block region.

20. The system of claim 19 further comprising means or code for generating a decision whether to target market to consumers associated with said specified demographic value that live in said geographic region.

21. The system of claim 19 further comprising means or code for determining a number of consumers associated with said specified demographic value that live in said geographic region.

22. The system of claim 21 further comprising means or code for determining whether to target market to consumers in said geographic region based upon either said number of consumers associated with said specified demographic value that live in said geographic region or an estimate of a ratio of number of consumers associated with said specified demographic value that live in said geographic region to total number of consumers that live in said geographic region.

23. The system of claim 19 further comprising means or code for determining an estimate of total value of goods purchased from said retail store by consumers associated with said specified demographic value that live in said geographic region.

24. The system of claim 23 further comprising means or code for determining whether to target market to consumers residing in said geographic region based upon an estimate of either said total value of goods purchased from said retail

store by consumers associated with said specified demographic value that live in said geographic region to total value of goods purchased in said block region from consumers having said specified demographic value.

25. A system for determining whether to target market to consumers residing in a block regions, comprising:

a transaction data database;

a block data database;

a computer system having read and write access to said transaction data database and said block data database;

wherein said transaction data database stores a plurality of consumer records each including at least a CID data (consumer identification data) indicating a consumer CID for a customer of said retail store;

wherein said block data database stores at least one block data record for a geographic region near the location of the retail store, each block data record storing, for its corresponding geographic region, a number of people or consumers residing in that region, a number of people or consumers residing in said region that have a specified value or range of values for a specified transaction history variable;

means or code for estimating either a fraction or an absolute number of consumers residing in said block region having transaction data having either said specified value or said range of values for said specified transaction history variable to define an estimate of said fraction or said absolute number; and

means or code for determining whether to target market to either said block region or to at least one consumer residing in said block region based upon at least said estimate of said fraction or said absolute number.

26. The system of claim 25 wherein said means or code for estimating estimates absolute number of consumers residing in said block region having transaction data having either said specified value or said range of values for said specified transaction history variable.

27. The system of claim 25 wherein said means or code for estimating estimates a fraction of consumers residing in said block region having transaction data having either said specified value or said range of values for said specified transaction

history variable.

28. The system of claim 25 wherein said specified transaction history variable is a quantity of spending in a prior time period.

29. The system of claim 25 wherein said specified transaction history variable is quantity of purchase of a specified product in a prior time period.

30. The system of claim 25 wherein said specified transaction history variable is quantity purchase in a specified class of products in a prior time period.

31. The system of claim 25 wherein said specified transaction history variable is a measure of redemption of transaction incentives in a prior time period.

32. The system of claim 25 wherein said specified transaction history variable is a measure of redemption of transaction incentive in a specified class of transaction incentives in a prior time period.

33. The system of claim 25 wherein said means or code for determining whether to target market to either said block region or to at least one customer residing in said block region also depends upon at least demographic data variable.

34. The system of claim 25 wherein said means or code for determining wether to target market to either said block region or to at least one customer residing in said block region also depends upon at least one derived data variable.

35. The system of claim 25 wherein said means or code for determining wether to target market to either said block region or to at least one customer residing in said block region also depends upon at least one mixed data variable.

36. A method for associating at least one assumed demographic data with a Consumer Identification ("CID") associated with a transaction history for a consumer, comprising:

providing a database;

providing a computer system having read and write access to said database; and

storing in said database a plurality of consumer records including a first consumer record for a first consumer;

storing in said first consumer record (1) CID data (consumer identification data) indicating a first consumer CID for said first consumer and, in association with

said first consumer CID, storing at least the following:

(2) transaction data in a first transaction class field indicating items transacted by said first consumer in a first transaction class during a first prior time period; and

(3) a first assumed non-transaction demographic data field for storing assumed non-transaction demographic data.

37. The method of claim 36 further comprising assuming a value for said first assumed non-transaction demographic data field of said first consumer record based upon data in other fields of said first consumer record.

38. The method of claim 36 further comprising deriving a value for a derived data field of said first consumer record based upon data in other fields of said first consumer record.

39. The method of claim 37 wherein said value for said assumed non-transaction demographic data field is a probability or an expectation.

40. The method of claim 38 wherein said value for said derived data field is a probability or an expectation.

41. The method of claim 36 further comprising identifying, from a group of assumed non-transaction demographic data fields in said first consumer record, that non-transaction demographic data field which has the highest probability of being correct.

42. The method of claim 41 further comprising identifying, from a group including at least one assumed non-transaction demographic data field and one mixed derived demographic data field in said first consumer record, that non-transaction demographic data field which has the highest probability of being correct for the corresponding consumer.

43. The method of claim 36 further comprising ranking a group of assumed non-transaction demographic data in said first consumer record according to the probability of the assumed non-transaction demographic data being correct for a consumer corresponding to said first consumer CID.

44. The method of claim 43 further comprising identifying, from a group including at least one assumed non-transaction demographic data field and one mixed derived demographic data field in said first consumer record, that non-transaction or

mixed derived demographic data field which has the highest probability of being correct for the corresponding consumer.

45. The method of claim 36 further comprising determining whether to offer to said first consumer an incentive based upon data stored in said first consumer record for at least one of an assumed non-transaction demographic, a dis-assumed non-transaction demographic, a mixed derived demographic, a most probable assumed non-transaction demographic, a most probable dis-assumed non-transaction demographic, a probability of assumed non-transaction demographic, a probability of dis-assumed non-transaction demographic, a ranking of assumed non-transaction demographic, and a ranking of dis-assumed non-transaction demographic associated with that consumer.

46. A method for defining or selecting terms of at least one purchase incentive offer to associate with a Consumer Identification ("CID") associated with a transaction history for a consumer, comprising:

providing a database;

providing a computer system having read and write access to said database; and

storing in said database a plurality of consumer records including a first consumer record for a first consumer;

storing in said first consumer record (1) CID data (consumer identification data) indicating a first consumer CID for said first consumer and, in association with said first consumer CID, storing at least the following:

(2) transaction data in a first transaction class field indicating items transacted by said first consumer in a first transaction class during a first prior time period;

(3) a first assumed non-transaction demographic data field for storing assumed non-transaction demographic data; and

defining or selecting terms of a purchase incentive offer to associate with said CID wherein said defining or selecting depends at least in part upon one of an assumed non-transaction demographic, dis-assumed non-transaction demographic, a most probable assumed non-transaction demographic, a most probable dis-assumed non-transaction demographic, a probability of an assumed non-transaction

demographic, a probability of dis-assumed non-transaction demographic, a ranking of an assumed non-transaction demographic, and a ranking of dis-assumed non-transaction demographic associated with that consumer.

47. The method of claim 46 wherein said defining or selecting depends at least in part upon assumed non-transaction demographic data.

48. A method for defining a probability value that a demographic data value either is associated with a consumer or is not associated with the consumer, comprising:

providing a database;

providing a computer system having read and write access to said database; and

storing in said database a plurality of consumer records;

storing in each one of said plurality of consumer records:

(1) CID data (consumer identification data) indicating a unique consumer CID, (2) transaction data in a first transaction class field indicating items transacted in a first transaction class during a first prior time period, and (3) a first actual demographic data field storing actual, non-assumed, demographic data for a first demographic variable;

determining correlations between transaction data and data stored in said actual demographic data field from said plurality of consumer records and using at least one of said correlations to define a probability function, wherein said probability function is a function at least of transaction data, and said probability function applied to a consumer record generates a probability value that the consumer associated with said consumer record has a specified value for said first demographic variable;

storing said probability value in a data field for said specified value for said first demographic value and said consumer record.

49. The method of claim 48 further comprising determining correlations using data from at least two transaction data fields in said plurality of consumer records.

50. The method of claim 48 further comprising determining correlations using data in at least three transaction data fields in said plurality of consumer records.

51. The method of claim 48 wherein said probability value is one or zero.

52. The method of claim 48 further comprising determining, by applying a function to demographics associated with said consumer and prior product incentive redemption history for said consumer, which of a set of incentive offers said consumer is most likely to redeem.

53. The method of claim 48 further comprising determining, from probability of each one of a set of assumed non-transaction demographics associated with said consumer, a set of incentive offers for purchase of specified products available to be offered to said consumer, and probability of said consumer redeeming each one of said set of incentive offers, which incentive offer, if actually offered to said consumer, is likely to result in the greatest profit.

54. A method for estimating a fraction of people having a specified demographic value that both shop in a specified retail store and live in a specified block region comprising:

providing a transaction data database;

providing a block data database;

providing a computer system having read and write access to said transaction data database and said block data database; and

storing in said transaction data database a plurality of consumer records each including at least a CID data (consumer identification data) indicating a consumer CID and a first assumed non-transaction demographic data field for storing assumed non-transaction demographic data for customers of said retail store;

storing in said block data database at least one block data record for a geographic region near the location of the retail store, each block data record storing, for its corresponding geographic region, a number of people or consumers residing in that region, and a number of people or consumers having said specified demographic value; and

using data stored in said both said transaction data database and said block data database to estimate said fraction of people having said specified demographic value that both shop in said specified retail store and live in said specified block region.

55. The method of claim 54 further comprising generating a decision whether to target market to consumers associated with said specified demographic value that live in said geographic region.

56. The method of claim 54 further comprising determining a number of consumers associated with said specified demographic value that live in said geographic region.

57. The method of claim 56 further comprising determining whether to target market to consumers in said geographic region based upon either said number of consumers associated with said specified demographic value that live in said geographic region or an estimate of a ratio of number of consumers associated with said specified demographic value that live in said geographic region to total number of consumers that live in said geographic region.

58. The method of claim 54 further comprising determining an estimate of total value of goods purchased from said retail store by consumers associated with said specified demographic value that live in said geographic region.

59. The method of claim 58 further comprising determining whether to target market to consumers residing in said geographic region based upon an estimate of either said total value of goods purchased from said retail store by consumers associated with said specified demographic value that live in said geographic region to total value of goods purchased in said block region from consumers having said specified demographic value.

60. A method for determining whether to target market to consumers residing in a block regions, comprising:

providing a transaction data database;

providing a block data database;

providing a computer system having read and write access to said transaction data database and said block data database;

storing in said transaction data database a plurality of consumer records each including at least a CID data (consumer identification data) indicating a consumer CID for a customer of said retail store;

storing in said block data database at least one block data record for a

geographic region near the location of the retail store, each block data record storing, for its corresponding geographic region, a number of people or consumers residing in that region, a number of people or consumers residing in said region that have a specified value or range of values for a specified transaction history variable;

estimating either a fraction or an absolute number of consumers residing in said block region having transaction data having either said specified value or said range of values for said specified transaction history variable to define an estimate of said fraction or said absolute number; and

determining whether to target market to either said block region or to at least one consumer residing in said block region based upon at least said estimate of said fraction or said absolute number.

61. The method of claim 60 wherein said estimating estimates absolute number of consumers residing in said block region having transaction data having either said specified value or said range of values for said specified transaction history variable.

62. The method of claim 60 wherein said estimating estimates a fraction of consumers residing in said block region having transaction data having either said specified value or said range of values for said specified transaction history variable.

63. The method of claim 60 wherein said specified transaction history variable is a quantity of spending in a prior time period.

64. The method of claim 60 wherein said specified transaction history variable is quantity of purchase of a specified product in a prior time period.

65. The method of claim 60 wherein said specified transaction history variable is quantity purchase in a specified class of products in a prior time period.

66. The method of claim 60 wherein said specified transaction history variable is a measure of redemption of transaction incentives in a prior time period.

67. The method of claim 60 wherein said specified transaction history variable is a measure of redemption of transaction incentive in a specified class of transaction incentives in a prior time period.

68. The method of claim 60 wherein said determining whether to target market to either said block region or to at least one customer residing in said block

region also depends upon at least demographic data variable.

69. The method of claim 60 wherein said determining whether to target market to either said block region or to at least one customer residing in said block region also depends upon at least one derived data variable.

70. The method of claim 60 wherein said determining whether to target market to either said block region or to at least one customer residing in said block region also depends upon at least one mixed data variable.

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